UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,201	08/31/2000	Anton Ephanov	0655/62549	2659

7590 12/30/2003	EXAMINER
Richard F Jaworski	CUNNINGHAM, GREGORY F
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ART UNIT	PAPER NUMBER
2676	8

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DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 September 2003</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-16</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-16</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>31 August 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

1.   This action is responsive to communications of amendment received //2003.

2.   The disposition of the claims is as follows: claims 1-16 are pending in the application.

Claims 1, 5, 7, 11, and 13 are independent claims.

Claim Rejections - 35 USC § 112

3.   In view of amended claim 4, rejection is withdrawn.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5.   Claims 1-3, 5-9, and 11-15 are rejected under 35 U.S.C. 102(a) as being disclosed by

Brockway et al., (U.S. Patent Number 6,456,288 B1), hereafter Brockway.

A.   Brockway discloses claim 1 in col. 11, lns. 10-25 at "(20) In a preferred embodiment of

the present invention, process Build Color Imagery Texture 45 builds a clip stack. A clip stack is

a multi-resolution data structure comprising the resolution sets necessary for rendering an image.

The clip stack is a data structure compatible with the Onyx2 computer system shown in FIG. 1.

The clip stack contains a copy of imagery data at low resolution, and a copy at successively

higher resolutions. In a preferred embodiment, high-resolution and low-resolution imagery, for

example, the present invention builds nineteen resolution levels for an image, for example, input

source imagery may be input at five-meter and forty-meter resolution. In a preferred

embodiment, for example, the forty-meter imagery data is stored in resolution level five and the

five-meter imagery data is stored in resolution level two. The present invention produces

resolution level one, which is higher resolution than the original source imagery data." (A

method of simulating clip texturing, comprising: providing a clip stack of a portion of a texture

image, the clip stack having ... of increasingly reduced resolution); and in col. 4, ln. 63 – col. 5,

ln. 3 at "The present invention, for example, builds a one-meter resolution image in the clip map

from high-resolution geotypical textures and then down samples that image to create lower-

resolution images at two meters, four meters, eight meters, etc. The present invention continues

generation of reduced-resolution data sets until it has generated and placed the geotypical texture

in every resolution level of the clip map." (rendering a geometry formed of at least one graphic

primitive, using one of the stacks of images generated).

Wherein [geotypical texture in every resolution level of the clip map], [data sets] and

[resolution sets], [The clip stack contains a copy of imagery data at low resolution, and a copy at

successively higher resolutions] respectively correspond to "portion of a texture image",

"plurality of levels, wherein each level includes data representing the portion of the texture

image at a different resolution", "wherein each stack of images includes data representing a

plurality of correlated images of increasing reduced resolution".

B.   Brockway discloses claim 2 in col. 10, lns. 45-52 at "(17)   Process Render with Vega 35

inputs Vega Regions 66 and Vega Clip Objects 67 and 68. The clip objects associate database

portions or files in the database with a particular image. The ADF file defines the regions and

clip objects. Vega associates files in the database with an image. The clip objects indicate which files use particular source imagery or SPLOT imagery. Thus Vega utilizes the Vega regions and Vega Clip objects to render an image in real-time." (further comprising generating for each stack of images, an object containing said data representing the plurality of correlated images of increasingly reduced resolution).

C.   Brockway discloses claim 3 in col. 13, lns. 35-45 at "(33) Turning now to FIG. 7, process Build Structure 43 inputs Base Contour Geometry (highest level of Detail) 140 localizes 142 the data so that the coordinates for each tile are local to the center of the tile, instead of all tile coordinates being relative to one common origin and stores the localized data in Localized Contour Geometry 144 (highest level of detail). Process Build Structure 43 inputs Base Contour Geometry (Lower Levels of Detail) 141 localizes 143 Base Contour Geometry 141 and stores the localized data in Localized Contour Geometry (Lower Levels of Detail) 145." (method as recited in claim 2, wherein each said object further contains information identifying a location of a center of the portion of the texture image).

D.   Per independent claim 5 and dependent claim 6, these are a method directed to a combination of method and apparatus hardware for performing the method of independent claim 1, and therefore is rejected to independent claim 1.

E.   Per independent claims 7 and 13 and dependent claims 8-9 and 14-15 these are directed to a computer readable medium and device apparatus, respectively, for performing the method of independent claim 1 and dependent claims 2-3, respectively, and therefore are identically rejected to independent claim 1 and dependent claims 2-3.

F.   Per independent claim 11 and dependent claim 12, these are directed to a computer

readable medium for performing the method of independent claim 5 and dependent claim 6,

respectively, and therefore are rejected to independent claim 5 and dependent claim 6.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   Claims 4 , 10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Brockway as applied to claim 1 above, and further in view of Nehme, (U.S. Patent Number

6,304,271).

A.   Although Brockway discloses claim 1 supra, he does not appear to disclose claim 4,

"calling a geometry, selecting one of the stacks of images, determining whether a bounding box

which defines bounds of the geometry is covered by a bounding box which define bounds of the

selected stack of images, if the bounding box of ... and repeating the determining, if the

bounding box of the geometry is ... using the selected stack of images", but Nehme does in col.

10, lns. 4-27 at "(38) The clip stack is initialized with the top-most screen bounding box. When

no crop region is on the stack, the main window coordinates are the top-most window in a

windows environment. The renderer 404 makes an intersection with the screen coordinates for

the crop region and the top-most coordinates from the stack and then pushes the crop region

screen coordinates on the clip stack 451. In response to this push, the clip region is set in the

operating system 220. While the crop region screen coordinates are temporarily stored on the

clip stack 451, the image (502) sends a "draw image" call to graphics 423.

(39) The "draw image" call includes the image's (502) bounding box, which is transformed to

screen coordinates prior to rendering the cropped image. To transform the bounding box, the

image 502 sends the bounding box coordinates to the renderer 404 via graphics 423. The

renderer 404 applies the same transform it applied to the crop region, as shown in the process

block 437. The process 437 returns screen coordinates for the image's bounding box. The

renderer 404 asks the operating system 220 to draw the image to the previously set crop region.

The operating system 220, having previously received the transformed crop region, paints the

image 502 where it overlaps the transformed bounding box."

Therefore it would have been obvious to one of ordinary skill in the art at the time the

invention was made to apply simulating texture using clip stacks disclosed by Brockway in

combination with clip stacks using a bounding box disclosed by Nehme, and motivated to

combine the teachings because it would provide more efficient image cropping functionality for

use in zooming as revealed in col. 1, lines 61-63 of Nehme.

B.   Per dependent claims 10 and 16, these are directed to a computer readable medium and

device apparatus for performing the method of dependent claim 4 and therefore are rejected to

dependent claim 4.

Response to Arguments

8.   Applicant's arguments filed 9/22/2003 have been fully considered but they are not

persuasive. While the claims are read in light of the specification, the specification is not read

into the claims, consequentially "an obelisk shape and consists of a clip stack portion and a clip

pyramid portion. In certain graphic languages the obelisk shape of a clipmap can not be properly

represented... a level of the clip stack can be represented with its own mipmap levels" is not read

into the claims. With respect to the independent claims 1, 5, 7, 11 and 13, Brockway discloses

these claims, wherein [geotypical texture in every resolution level of the clip map], [data sets]

and [resolution sets], [The clip stack contains a copy of imagery data at low resolution, and a

copy at successively higher resolutions] respectively correspond to "portion of a texture image",

"plurality of levels, wherein each level includes data representing the portion of the texture

image at a different resolution", "wherein each stack of images includes data representing a

plurality of correlated images of increasing reduced resolution", as detailed supra. Therefore

claims stand rejected.

Conclusion

9.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Responses

10.   Responses to this action should be mailed to: Commissioner of Patents and Trademarks,

Washington, D.C. 20231. If applicant desires to fax a response, (703) 872-9314 may be used for

formal communications.

        Please label "PROPOSED" or "DRAFT" for informal facsimile communications. Hand-

delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA.,

Sixth Floor (Receptionist).

Inquiries

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Greg Cunningham whose telephone number is (703) 308-6109.
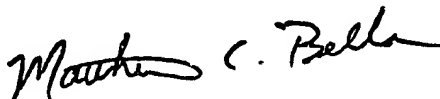
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Matthew Bella, can be reached on (703) 308-6829.

        Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-4700.

gfc

December 23, 2003

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
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